Watershed Evaluations

03050107-010

(South Tyger River)

General Description

Watershed 03050107-010 is located in Greenville and Spartanburg Counties and consists primarily of the ***South Tyger River*** and its tributaries. The watershed occupies 110,015 acres of the Piedmont region of South Carolina. The predominant soil types consist of an association of the Cecil-Cataula series. The erodibility of the soil (K) averages 0.29, and the slope of the terrain averages 8%, with a range of 2-25%. Land use/land cover in the watershed includes: 59.2% forested land, 20.4% agricultural land, 9.7% urban land, 8.1% scrub/shrub land, 1.5% water, and 1.1% barren land.

Mush Creek (Johnson Creek, Dysort Lake, Meadow Fork), Barton Creek (McKinney Creek also known as Burban Fork Creek, Noe Creek), and Pax Creek join to form the South Tyger River near Pax Mountain. Just downstream of the confluence the South Tyger River is impounded to form Lake Robinson. Downstream of Lake Robinson, the South Tyger River is joined by Beaverdam Creek and forms Lake Cunningham (Clear Creek). Downstream from Lake Cunningham near the City of Greer, the river accepts drainage from Frohawk Creek, Wards Creek, and Maple Creek. The river then flows through Berrys Pond (60 acres) and accepts drainage from 58 acre-Silver Lake (Williams Creek), Brushy Creek (Powder Branch), Bens Creek, Chickenfoot Creek, and Ferguson Creek (Quarter Creek, Big Ferguson Creek, Little Ferguson Creek). There are several ponds and lakes (totaling 1,503.9 acres) and a total of 201.9 stream miles in this watershed, all classified FW.

Water Quality

Station #	Type	Class	Description
B-317	P	FW	MUSH CREEK AT SC 253, BELOW TIGERVILLE
B-741	BIO	FW	SOUTH TYGER RIVER AT UNNUMBERED ROAD, S OF S-23-569
CL-100	W	FW	LAKE ROBINSON IN FOREBAY NEAR DAM
B-341	W	FW	LAKE CUNNINGHAM IN FOREBAY NEAR DAM
B-149	S	FW	SOUTH TYGER RIVER AT SC 14, 2.9 MI NNW OF GREER
B-263	S	FW	SOUTH TYGER RIVER AT SC 290, 3.7 MI E OF GREER
B-625	BIO	FW	MAPLE CREEK AT SR 644
B-005A	BIO	FW	SOUTH TYGER RIVER AT S-42-242
B-005	S	FW	SOUTH TYGER RIVER AT S-42-63
B-782	BIO	FW	BENS CREEK AT SC 417
B-332	W	FW	SOUTH TYGER RIVER AT S-42-86, 5 MI NE OF WOODRUFF
B-787	BIO	FW	FERGUSON CREEK AT SR 86

South Tyger River - There are six monitoring sites along the South Tyger River. At the furthest upstream site ***(B-741),*** aquatic life uses are fully supported based on macroinvertebrate community data. At the next site downstream ***(B-149),*** aquatic life uses are fully supported; however, there are significant decreasing trends in dissolved oxygen concentrations and pH. Significant decreasing trends in five-day biochemical oxygen demand and turbidity suggest improving conditions for these parameters.

Recreational uses are fully supported at this site. Aquatic life uses are fully supported further downstream ***(B-263)***; however, there is a significant decreasing trend in pH and significant increasing trends in total phosphorus concentration and turbidity. A significant increasing trend in dissolved oxygen concentration and a significant decreasing trend in five-day biochemical oxygen demand suggest improving conditions for these parameters. Recreational uses are partially supported at this site due to fecal coliform bacteria excursions.

Continuing downstream ***(B-005A),*** aquatic life uses are partially supported based on macroinvertebrate community data. At the next site downstream ***(B-005),*** aquatic life uses are fully supported, although there is a significant decreasing trend in pH and significant increasing trends in total phosphorus concentration and turbidity. A significant decreasing trend in five-day biochemical oxygen demand suggests improving conditions for this parameter. Recreational uses are not supported at this site due to fecal coliform bacteria excursions, compounded by a significant increasing trend in fecal coliform bacteria concentrations. At the furthest downstream site ***(B-332),*** although there were some zinc excursions and one high concentration in 1995, aquatic life uses are fully supported based on macroinvertebrate community data. Recreational uses are partially supported due to fecal coliform bacteria excursions.

Mush Creek (B-317) - Aquatic life uses are fully supported. Significant decreasing trends in five-day biochemical oxygen demand and total nitrogen concentration suggest improving conditions for these parameters. Recreational uses are not supported at this site due to fecal coliform bacteria excursions.

Lake John Robinson (CL-100) - Lake Robinson is an 802-acre impoundment on the South Tyger River in Greenville County, with a maximum depth of approximately 40 feet (12.3 m) and an average depth of approximately 18 feet (5.4 m). Lake Robinson=s watershed comprises 47 square miles (123 km2). Aquatic life uses are partially supported due to pH excursions. Recreational uses are fully supported.

Lake Cunningham (B-341) - Lake Cunningham is a 250-acre impoundment on the South Tyger River in Greenville County, with a maximum depth of approximately 19 feet (5.8 m) and an average depth of 8.9 feet (2.7 m). Lake Cunningham's watershed comprises approximately 48 square miles (124 km2), and includes Lake John Robinson. Aquatic life and recreational uses are fully supported.

Maple Creek ***(B-625)*** - Aquatic life uses are fully supported based on macroinvertebrate community data.

Bens Creek ***(B-782)*** - Aquatic life uses are fully supported based on macroinvertebrate community data.

Ferguson Creek ***(B-787)*** - Aquatic life uses are fully supported based on macroinvertebrate community data.

Natural Swimming Areas

FACILITY NAME *RECEIVING STREAM*	*PERMIT #* *STATUS*
LOOK UP LODGE BURBAN FORK CREEK	23-N14 ACTIVE

NPDES Program

Active NPDES Facilities

RECEIVING STREAM *FACILITY NAME* *PERMITTED FLOW @ PIPE (MGD)*	*NPDES#* *TYPE* *LIMITATION*
SOUTH TYGER RIVER SSSD/S. TYGER REGIONAL WWTP PIPE #:001 FLOW: 1.0-2.0 WQL FOR TRC	SC0047732 MAJOR DOMESTIC WATER QUALITY
SOUTH TYGER RIVER LAKEVIEW STEAK HOUSE PIPE #: 001 FLOW: 0.0158	SC0030465 MINOR DOMESTIC EFFLUENT
SOUTH TYGER RIVER MEMC ELECTRONIC MATERIALS PIPE #: 001 FLOW: 0.9 WQL FOR TRC; NOT OPERATING	SC0036145 MAJOR INDUSTRIAL WATER QUALITY
SOUTH TYGER RIVER CITY OF GREER CPW WTP PIPE #: 001 FLOW: M/R PIPE #: 002 FLOW: M/R WQL FOR TRC	SCG645020 MINOR DOMESTIC WATER QUALITY WATER QUALITY
SOUTH TYGER RIVER SSSD/RIVER FALLS PLANTATION PIPE #: 001 FLOW: 0.07 NOT OPERATING	SC0043524 MINOR DOMESTIC EFFLUENT
SOUTH TYGER RIVER CITY OF GREER/MAPLE CREEK PLT PIPE #: 001 FLOW: 3.0 (PHASE I) PIPE #: 001 FLOW: 4.5 (PHASE II) WQL FOR DO,TRC,NH3N	SC0046345 MAJOR DOMESTIC WATER QUALITY WATER QUALITY
WARDS CREEK KOCH MATERIALS CO. PIPE #: 001, 002 FLOW: M/R	SC0048003 MINOR INDUSTRIAL EFFLUENT
BEAVERDAM CREEK HANSON AGGREGATES/SANDY FLATS PIPE #: 001 FLOW: M/R	SCG730079 MINOR INDUSTRIAL EFFLUENT
BURBAN FORK CREEK LOOK UP LODGE/PM UTILITIES INC. PIPE #: 001 FLOW: 0.03 WQL FOR TRC,NH3N	SC0026379 MINOR DOMESTIC WATER QUALITY

MEADOW FORK UNITED UTIL./NORTH GREENVILLE COLLEGE PIPE #: 001 FLOW: 0.04 WQL FOR TRC,NH3N	SC0026565 MINOR DOMESTIC WATER QUALITY
WILLIAMS CREEK CARMET COMPANY PIPE #: 001 FLOW: 0.009 PIPE #: 002 FLOW: 0.057 WQL FOR DO,TRC,NH3N	SC0038083 MINOR INDUSTRIAL WATER QUALITY WATER QUALITY
WILLIAMS CREEK MILLIKEN/ARMITAGE PLT PIPE #: 001 FLOW: 0.36 WQL FOR TRC,NH3N	SC0023451 MINOR INDUSTRIAL WATER QUALITY
WILLIAMS CREEK TRIBUTARY US ALUMOWELD CO., INC. PIPE #: 001 FLOW: 0.003 WQL FOR NH3N,TRC	SC0043982 MINOR INDUSTRIAL WATER QUALITY

Nonpoint Source Management Program

Camp Facilities

FACILITY NAME/TYPE ***RECEIVING STREAM***	***PERMIT #*** ***STATUS***
LOOK UP LODGE/RESIDENT BURBAN FORK CREEK	23-305-0116 ACTIVE

Land Disposal Activities

Landfill Facilities

LANDFILL NAME ***FACILITY TYPE***	***PERMIT #*** ***STATUS***
BLUE RIDGE LANDFILL DOMESTIC	DWP-071 (SCD987581329) CLOSED
BLUE RIDGE LANDFILL DOMESTIC	DWP-082 (SCD987581329) CLOSED
GODFREY LANDFILL INDUSTRIAL	IWP-225 CLOSED
GLENN SHORT TERM C&D LANDFILL C&D	232903-1301 ----------
WING QUARRY C&D LANDFILL C&D	232644-1201 ----------
BROOKWOOD DRIVE LANDFILL --------	232900-1301 ----------
RHEM GRADING ---------	422900-1302 ----------

CITY OF GREER	231003-6001
DOMESTIC	---------

Land Application Sites

LAND APPLICATION SYSTEM *FACILITY NAME*	*ND#* *TYPE*
SPRAYFIELD	ND0067351
RD ANDERSON APPLIED TECH. CTR.	DOMESTIC

Mining Activities

MINING COMPANY *MINE NAME*	*PERMIT #* *MINERAL*
DAVIDSON MINERAL PROPERTIES, INC.	0502-45
SANDY FLAT QUARRY	GRANITE
WR GRACE & CO.	1140-45
TIGER MINE	VERMICULITE

Water Supply

WATER USER *STREAM*	*TOTAL PUMP. CAPACITY (MGD)* *RATED PUMP. CAPACITY (MGD)*
CITY OF GREER CPW	23.0
LAKE CUNNINGHAM	18.0

Growth Potential

There is a high potential for industrial, commercial, and residential growth in this watershed, which contains the City of Greer, and portions of the Town of Duncan and the City of Woodruff. The Greenville-Spartanburg Airport expansion, the development of the BMW automotive plant, and highway improvements in the area surrounding the BMW plant will stimulate continued growth. Growth is also expected around the I-85 and U.S. Hwy. 29 corridors, which connect the Cities of Greenville, Greer, and Spartanburg. The Town of Duncan is expected to serve as a bedroom community for the Greer-Spartanburg area.